

Applicant: Kari M. Mäki
Application No.: 09/966,424
Art Unit: 3629

Claim Listing

1. (canceled)

2. (currently amended) The method of claim [[1]] 20 wherein the service system server is located within the confines of a firewall of the local information network of the production plant.

3. (currently amended) The method of claim [[1]] 20 wherein [[in]] the service system server treats the gathered data ~~is treated and processed~~ and processes the data into a format ~~essentially~~ needed in servicing operations.

4. (currently amended) The method of claim [[1]] 20 wherein authorized users in the service unit and the production plant are identified by the IP addresses of the computers between which the communications connection is to be established and/or by ID codes and/or passwords of the computer operators.

5. (currently amended) The method of claim [[1]] 20 wherein the service unit is located geographically remote from the production plant.

6. (currently amended) The method of claim [[1]] 20 wherein information is collected to the service unit from a plurality of production plants.

7. (currently amended) The method of claim [[1]] 20 wherein the service system server sends information to the service unit in a standard format.

8. (currently amended) The method of claim [[1]] 20 wherein information submitted from the production plant is analyzed in the service unit.

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9. (currently amended) The method of claim ~~[[1]]~~ 20 wherein operational recommendations are sent from the service unit to the production plant.

10. (currently amended) The method of claim ~~[[1]]~~ 20 wherein information analyzed in the service unit is utilized for determining the timing of scheduled maintenance in the units of the production plant.

11. (currently amended) The method of claim ~~[[1]]~~ 20 wherein data, video and/or audio signals are transferred between the production plant and the service unit.

12-18. (canceled)

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19. (currently amended) A method for servicing a production plant selected from the group consisting of a paper mill, a board mill, a pulp production plant, and a paper finishing plant; comprising the steps of:

gathering information related to manufacturing processes and machinery of the production plant by at least one information system, measurement unit, or production control unit;

connecting a service system server to a local information network of the production plant;

inputting said gathered information to the service system server;

ai sending said input gathered information from the production plant by or through the Internet to a remote service unit, wherein the information submitted from the production plant is collected and analyzed;

isolating said local information network of the production plant from the Internet by a firewall;

isolating the information network of the service unit from the Internet by a firewall;

[[and]]

transferring the information bidirectionally via the firewalls between the local information network of the production plant and the information network of the service unit in a secured format; and

wherein data, video and/or audio signals are transferred between the production plant and the service unit.

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20. (new) A method for servicing a production plant selected from the group consisting of a paper mill, a board mill, a pulp production plant, and a paper finishing plant; comprising the steps of:

continuously collecting data related to manufacturing processes and machinery of the production plant by at least one information system, measurement unit, or production control unit;

connecting a service system server to a local information network of the production plant;

inputting said gathered data to the service system server;

sending said input gathered data from the production plant to a remote service unit by or through the internet, wherein the data submitted from the production plant is collected and analyzed;

isolating said local information network of the production plant from the Internet by a firewall;

isolating the information network of the service unit from the Internet by a firewall; and

transferring the data bidirectionally via the firewalls between the local information network of the production plant and the information network of the service unit in a secured format; and

scheduling maintenance periods based on the continuous data collection and extending the periods when the units of machinery exhibit continuous operation without any signs of malfunction;

anticipating future needs of servicing based on the continuous data collection showing emerging malfunctions; servicing the production plant selected from the group consisting of a paper mill, a board mill, a pulp production plant, and a paper finishing plant; and installing spare parts installations before actual malfunction occurs.
